

ECS
Evaluation Packages
EP7 Objectives Review
Keith Bryant

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Agenda

- **EP Overview**
- **EP7 Events & Schedules**
- **EP Overall Plan**
- **Adoptions/Lessons Learned from EP6 and PW2**
- **Science Scenarios and Data**
- **EP7 Prototypes and Incremental Development**
- **EP7 Integration and Test**
- **Evaluation Plan**

EP7 Leads

Keith Bryant, Coordinator

Lynne Case, Technical Lead

Ed Dombrowski, Science Office Liaison

Kevin Limperos, Rel B Client Subsystem

Sreedhar Muppalla, Rel B Data Management Subsystem

Lynne Case*, Interoperability Subsystem

Judy Smith*, Rel A Data Server Subsystem

Alex Kirn, Management Subsystem

Perry Miranda, I&T

Jan Poston Day, Evaluation

*Temporary

EP Overview

- **EP Goal**
 - **Implement Critical Portions of ECS Functionality for:**
 - **Requirements Evolution for User Access**
 - **Refinement of Requirements**
 - **Validation of the Design**
 - **Early Testing of COTS**
 - **Iteration of User Interfaces**
 - **Incorporation of End User / Tirekicker Comments**
 - **Propagate Lessons Learned**

EP Overview cont'd

- **Components**
 - **Incremental**
 - **Implement Customer Identified Critical Parts of the Formal Releases**
 - **Developed to Standards**
 - **Design Inspections, Code Inspections, Testing, Software Development Files**
 - **Integrated into Releases**
 - **Prototype**
 - **Assess New Technology and Ideas for the Purpose of Trading Design Issues**
 - **Limited I&T (Brief I&T; Level 1 NCRs only)**

EP Events & Schedules

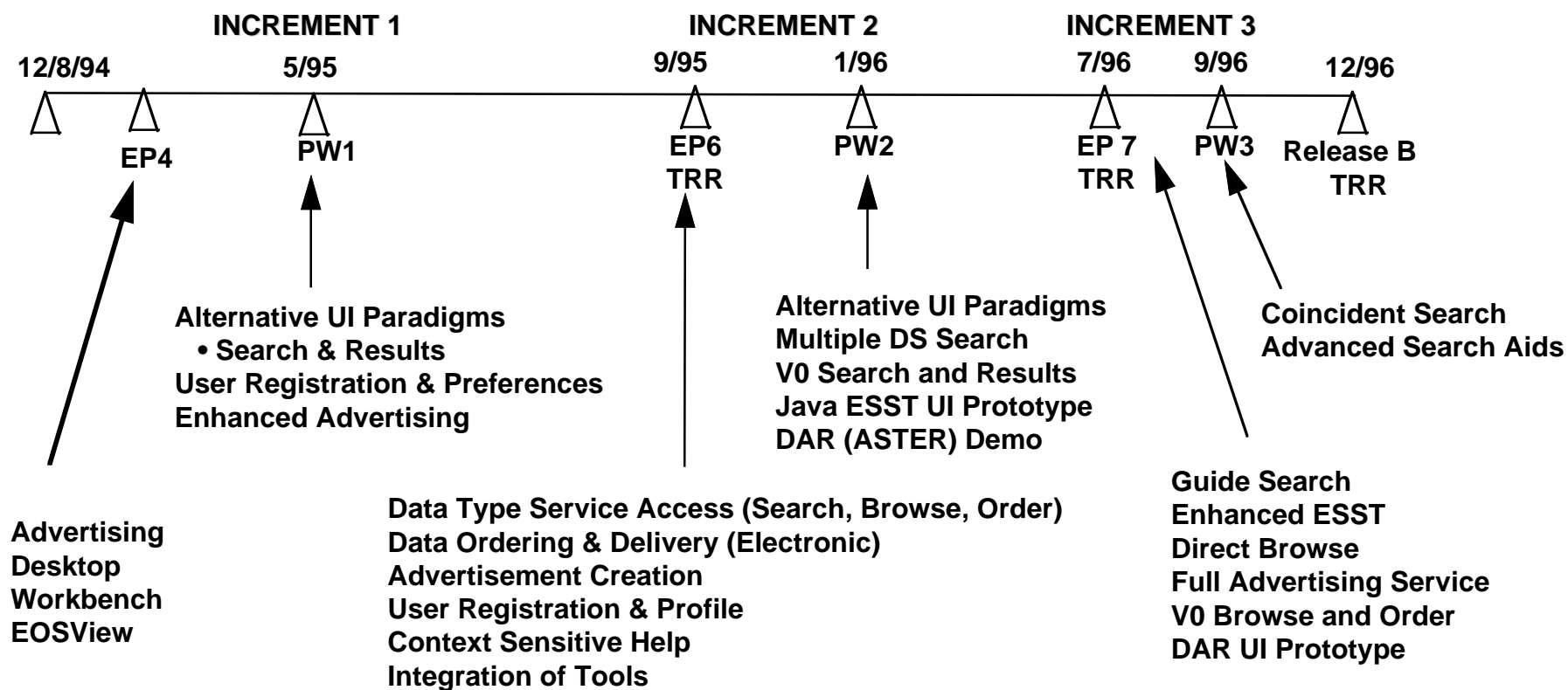
Schedule of Reviews	EP7	PW3*	EP8**
Objectives	2/16/96		
Design	3/20/96		
Test Readiness	5/15/96		
Consent to Ship	6/26/96		
+Evaluation Readiness	7/17/96		
Workshop		9/96	

* Tentative Date

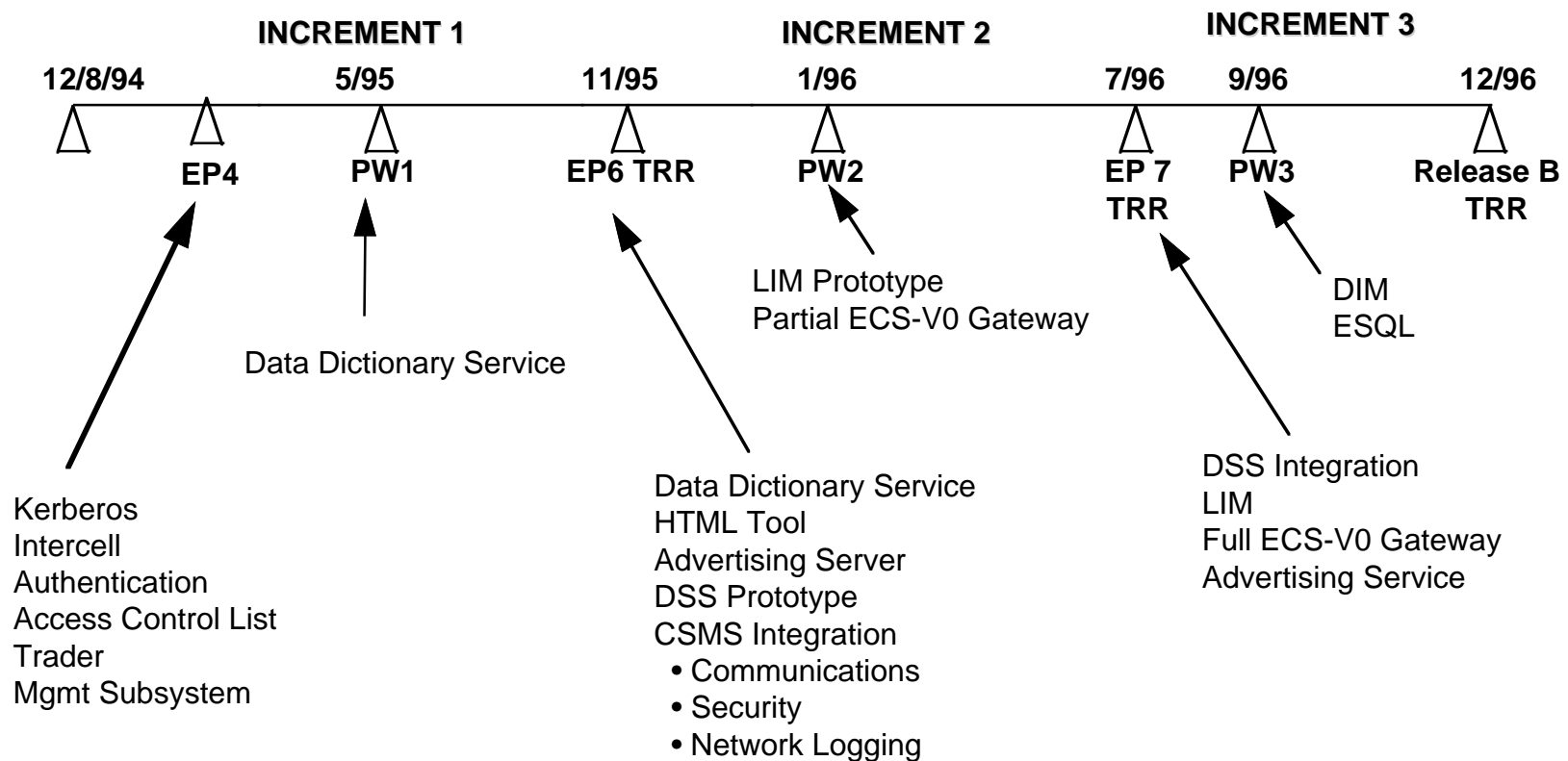
** Tentative EP, no dates

+ Evaluation Period of 8 to 10 weeks

EP Overall Plan (User Perspective)



EP Overall Plan (Internals)



EP6 Adoptions/Lessons Learned

- Deliver a robust, usable EP than can be evaluated (*#1 process objective*)
- Start the port to HP and SGI early
- Continue to involve science users in design process
- Science Office as integral team member
 - Sanitize data sets
 - Involve in test case development
 - Early usability testing as part of I&T
- Involve sites in I&T; conduct multiple user tests as part of I&T

PW2 Adoptions/Lessons Learned

- **Improve ESST, including**
 - **Address scalability of valid values and attributes**
 - **Enhance the timeline tool**
 - **Address metadata exceptions (i.e., non-core attributes)**
- **More data for end-to-end tests**

EP7 Metadata

- Additional Metadata Challenge (reviewers want both):
 - » More Variety of Collections and Granules.
 - » More Volume of Metadata.
- Proposed Solution:
 - » Increase the Variety of Collections (with a focus on parameter rich Collections) while choosing candidates with a wide range in granule content.
 - » Build on existing PW1, EP6 and PW2 Collections and granules; look into potentially using some sample V0 migrated metadata products, if available.
 - » Validate both existing and new metadata entries in the Data Dictionary.

EP7 Metadata (continued)

- How?
 - » Poll the TireKickers based upon the aforementioned criteria and EP6/PW2 feedback, soon after the EP7 OR.
 - » Draft a composite solution set for EP7 and review for size constraints, accessibility, and other ECS ingest issues.
 - » Implement an ECS capture plan in March.
 - » Ingest metadata as it is received.

EP7 Scenarios and Testing

- Scenarios
 - » Add to the EP6 scenario baseline.
 - » Solicit/Review potential scenarios with the TireKickers and link this to the Metadata Review process.
 - » Select Key candidate scenarios for EP7.
- System Testing
 - » Work with I&T to:
 - Setup more rigorous testing sessions with SO personnel.
 - Use the scenarios to help with the system evaluation.
 - Coordinate training sessions with liaisons and other key personnel.

EP7 Interactive Scenarios

- EP7 On-Line System Walk-Throughs (Web)
 - » EP6 and PW2 On-line Walk-Throughs were successful.
 - » Present the following EP7 guides:
 - A generic system overview (basic tutorial) with point-and-click information for the EP7 tools and processes.
 - EP7 science scenario walk-throughs, start to finish, of how a user will get into the system with a data capture objective; includes a step by step use of EP7 tools.

EP7 Prototypes and Incremental Development

- Focus
- Hardware and OS Supported
- Client
- Data Management
- Interoperability
- Data Server
- Management Subsystem

EP7 Focus

- **Robust EP with content focus on:**
 - **Guide Search**
 - **Other types of searches (i.e., geographic region)**
 - **Full V0 Interoperability (search, results, browse, order)**
 - **Enhanced ESST**
 - **More capable Java Earth Science Tool Prototype**
 - **DAR Prototype User Interface**

Hardware and OS Supported in EP7

- **HP 9000/7xx - HP-UX 9.0.5**
- **SUN Sparc - Solaris 2.4**
- **SGI - IRIX 5.3**
- **NO Plan for DEC Support**
 - **Additional OODCE Port required (Will Not be Available for EP7)**

Client Subsystem (CLS)

Objectives: X Client

- **General Objectives**
- **Develop capabilities most important to tirekickers**
- **Implement dramatic improvement in ESST usability**
- **Continue tight interaction with throughout BOTH the design and development phases: <http://observer.gsfc.nasa.gov/esst/esst.html>**
- **Devise list of tirekicker commentary from previous EPs, PWs, Version 0 IMS and the URDB. Assign disposition (i.e., Resolved, Further Disposition Required) and priority to each item.**
- **Investigate the possibility of requested enhancements to the ECS Desktop**

CLS Objectives: X Client cont'd

- **Earth Science Search Tool**
 - **Complete Asynchronous Search capability**
 - Provide capability to switch between results screens on one results window
 - **Provide Guide Search capability from search screen**
 - **Implement scalable valid values**
 - Scrollable, tear-off pop-up dialog menu with Find feature for long lists of valid values
 - **Display granule coverage**
 - **Implement results sorting and reaggregation (Use N/A if no data)**
 - **Add “Region” attribute which participates in the valid value process**
 - **Update spatial and timeline tools contingent upon evaluation of candidate tools**
 - **Display metadata exceptions (i.e., non-core attributes)**
 - **Allow search and order on select non-core attributes**
 - **Complete the link from Advertising Service (Install/Invoke)**

CLS Objectives: X Client con'td

- **Prototype**
 - **ASTER DAR Prototype - User Interface Only**

CLS Objectives: Web Clients

Objectives

- Develop toward the ECS Release B science user interface with Web technologies, wherever applicable
- Prototype alternative for X/Motif client with latest Internet technologies, i.e., Java and JavaScript
- Incorporate concepts from other prototypes, e.g., UMD Dynamic Query
- Incorporate feedback from previous EPs, PWs and internal lessons learned

Document Search Tool (DST)

- New
- Single site guide search through DM/LIM
- Support document formats: HTML, PostScript, ASCII
- Save/Retrieve documents at the client side

CLS Objectives: Web Clients cont'd

Java Earth Search Tool (JEST)

- Prototype
- End-to-end capabilities: search, result, browse, acquire
- Implement dependent valids
- Improve performance

EP6 Web Clients

- User Registration/Profile Tool (URT), Data Dictionary Tool (DDT), and Comment Survey Tool (CST)
- Implement additional L4 requirements, e.g.,
 - URT: Allow “group” registration and profile updates
 - DDT: Support “aliases”
 - CST: Add timestamp and software release version id

Data Management (DMS) Objectives

- **Support polygonal search at LIM & V0 Gateway**
- **Support browse request to Rel A DSS**
- **Handle product requests from LIM to both science data server (SDSRV) and V0 Gateway**
- **Provide guide search from LIM**
- **Support aliasing in Data Dictionary Service**
- **Ingest more metadata to Data Dictionary**

EP7 Advertising Service (ADSRV) Objectives

Release A Phase II Advertising Interface

- **Enhanced advertising searches over EP6.**
- **Installer not due until Release B, so will use EP6 installer to integrate with ESST.**
- **Service advertisements to match available services in LIM, DSS, and V0 GTWAY.**

Data Server (DSS) Objectives

Release A Phase II Data Server

- Document Data Server with HTTP and WAIS interface to support Guide Search.
- Spatial searches to include polygon searches.
- Updated browse interface so there are no FTP parameters required by the user.
- Acquire support (product request) for electronic distribution only.

****** Data Server will still be single-threaded. Large requests by users will block other users from access to the server.**

Internet Service

- **Service provider specifies a Mime Type service advertisement**
- **Besides the name and description of the service, the only other requirement is the URL to the service.**
- **Could contain Java Applets or other advanced features. It will be up to service provider to determine user's browser capabilities.**

Management Subsystem (MSS) Objectives

- **User Account Management**
 - Add group field to user registration tool.
- **Mode Management**
 - Incorporate the Mode Management Service into HP Openview.
 - Demonstrate process distinction and separation
 - Incorporate the process framework into a managed application.
 - Demonstrate application's registration within the proper HP Openview session based on mode.

MSS Objectives cont'd

- **Trouble Ticket**
 - Log trouble tickets into the user services data base
 - Configure to send notification to ECS Help Desk
- **Comment/Survey Tool**
 - Add timestamp to each entry
 - Add new survey categories based on added features

EP7 Integration & Test

- **Dedicated I&T Team**
- **Phased Thread/Build Diagram: Parallel Development and I&T**
- **Integration Test Planning and Results Notebook:**
 - **Test Cases**
 - **Test Configuration**
 - **Procedures**
 - **Final Test Report**
- **Participate in Design & Code Inspections**
- **Code Delivered Under Configuration Management Control**
- **Non-Conformance Reports (NCRs): Reporting and Fix Verification**
- **Coordinated Science User Scenarios Testing**
- **Improve Communications between I&T, Science Office, DAAC and Tirekickers Liaisons**
 - **Test Status Reports**
 - **NCR Reports**
- **Software Deployment**
 - **Installation Scripts**
 - **Test Installation Scripts**

EP7 Evaluation Methods

- **Usability Testing**
 - Test sessions based on user scenarios
 - Tests conducted in controlled environment at Landover
- **On-line Survey using the Comment Survey Tool (CST)**
 - Questions from EP4, EP6, and PW2 will be re-used as appropriate in order to monitor changes in user satisfaction since previous EPs and PWs.

EP7 Evaluation Terms

- **EP7 Evaluators** - NASA Tirekickers and other potential end users of the ECS. They will access the EP7 at their own convenience using the client installed at their site or remotely logging in to the nearest DAAC.
- **Usability Participants** - a subset of the EP7 Evaluators who will participate in the usability test sessions conducted at Landover. Usability test sessions will be conducted in a controlled environment using tasks developed for EP7 user scenarios.
- **Evaluation Period** - the 8 to 10 week period during which the Evaluators will be able to log on and test the EP7 and the usability tests will be conducted.

User Feedback

- **All EP7 Evaluator comments from the on-line survey and usability testing will be analyzed.**
- **Key comments will be input as suggestions to the User Recommendations Data Base (URDB) and tracked.**
- **User comments, usability test results, evaluation statistics, and lessons learned will be included in the EP7 Evaluation Report.**

EP6 Objectives Review Wrap-UP

- **Additional Comments**
- **Cleanup from DOR**
 - **Planning exercise will determine the final list of objectives to which EP7 will commit. List on EP7 web site one week after DOR (2/23/96).**
 - **EP7 site: <http://ecsinfo.hitc.com/ep7/ep7.html>**
- **Next: EP7 Design Review - 3/20/96**